

**REMARKS**

Reconsideration of the application is respectfully requested. Claims 5 and 16 have been amended. No new matter has been added. Claims 5-16 are pending and at issue.

Claim 5 has been amended to specify the alternative drying steps of drying under vacuum, or drying under vacuum and ordinary pressure. Support for this amendment is found in the specification at page 15, lines 1-3 and page 21, Table 4.

Claim 16 has been amended to specify that the “output is a measure of resistance between the surface of the head and the surface of the protection layer.” Support for this amendment is found in the specification at page 23, lines 1-11 and page 28, lines 13-20.

**Rejections Under 35 U.S.C. § 112, First Paragraph**

Claims 7, 8, 10, 11, 14, and 15 have been rejected under 35 U.S.C. § 112, first paragraph, as not enabled. According to the Examiner, the properties recited in these claims are not achieved when the resin is dried under ordinary pressure alone. Claim 5 has been amended to specify that the resin may be dried under vacuum, or under vacuum and ordinary pressure. Thus, claims 7, 8, 10, 11, 14, and 15 do not recite properties achieved upon drying under ordinary pressure alone. Accordingly, this rejection should be withdrawn.

Claim 16 has been rejected under 35 U.S.C. § 112, first paragraph, as not enabled. According to the Examiner, a person of ordinary skill could not determine the scope of this claim because the interaction between the head surface structure and the protective layer is not expressly recited in the claim. Claim 16 has been amended to specify that the “output is a measure of resistance between the surface of the head and the surface of the protection layer.” Thus, amended claim 16

recites the interaction between the head surface structure and the protective layer, and a person of ordinary skill in the art would understand the full scope of this claim. Consequently, this rejection should be withdrawn.

#### **Rejections Under 35 U.S.C. § 112, Second Paragraph**

Claims 9 and 13 have been rejected under 35 U.S.C. § 112, second paragraph, as indefinite. According to the Examiner, the specification does not define the term “rugged portions” or describe an objective method of measuring “rugged portion.”

The rejection is respectfully traversed, and reconsideration is requested.

The present specification expressly states that a “rugged portion” is a “surface defect.” Specification at p. 17, lines 5-6. Additionally, both the claims and the specification of the present application clearly define a rugged portion as being “1 $\mu$ m x 1 $\mu$ m or wider in area.” *See* claims 9 and 13; and Specification at p. 6, lines 11-12. Further, the specification discloses that the number of rugged portions may be objectively measured under an optical microscope. *See* Specification at p. 12, lines 22-23. In view of these explicit disclosures, a person of ordinary skill in the art would understand that “rugged portions” are surface defects of a particular size, and would also know how to objectively measure such surface defects by means of the routine operation of an optical microscope. Therefore, this rejection should be withdrawn.

#### **Rejections Under 35 U.S.C. § 102**

Claims 5 and 6 have been rejected under 35 U.S.C. § 102(b) as anticipated by Brekner et al. (U.S. Patent No. 5,439,722) (“Brekner”). Brekner discloses a norbornene resin dried at 80°C and 0.2 bar. *See* Brekner at col. 8, lines 15-18. Claim 5 has been amended to specify the alternative drying

steps of drying under vacuum, or drying under vacuum and ordinary pressure. Brekner's step of drying at 0.2 bar does not qualify as either "drying under vacuum" or drying "under vacuum and ordinary pressure," as recited in claim 5. According to the specification, "drying under vacuum" refers to a pressure of "20 Pa or lower" (Specification at p. 15, lines 3-4; and p. 21, Table 4), which is equal to a pressure of 0.0002 bar. Because Brekner only discloses a drying step at 0.2 bar, this reference fails to disclose all the features of claims 5 and 6. Therefore, this rejection should be withdrawn.

### **Rejections Under 35 U.S.C. § 103**

Claims 9, 12, and 13 have been rejected under 35 U.S.C. §103(a) as obvious over Brekner in view of the Background section of the present specification (*see* Specification at p. 4, lines 4-14). According to the Examiner, it would have been obvious for a person of ordinary skill in the art to have employed Brekner's substrate in a magnetic recording medium because the specification states that norbornene substrates are typical and known to be used in magnetic recording media.

Claim 5 has been amended to specify that the resin is dried under vacuum, or under vacuum and ordinary pressure. This allows for the efficient removal of gas components contained in the norbornene resin. Specification at p. 18, line 24 to p. 19, line 2. Brekner does not teach or suggest a substrate prepared with a resin that is dried under vacuum. Rather, Brekner specifies drying its resin at a positive pressure of 0.2 bar. Brekner at col. 8, lines 15-18. The present Background section does not cure the deficiencies of the cited prior art. Consequently, there is no disclosure in either Brekner or the present Background section that would have motivated a person of ordinary skill in the art to modify Brekner's method of drying the resin at positive pressure in favor of the presently claimed method of drying under vacuum or under vacuum and ordinary pressure.

Furthermore, the rugged portions recited in claims 9 and 13 are sufficiently definite because a person of ordinary skill in the art would understand the scope of these claims as discussed above. Thus, contrary to the Examiner's view, the language regarding "rugged portions" in these claims does indeed have meaning. Moreover, Brekner does not teach or suggest a substrate having "100 or less rugged portions of  $1\mu\text{m} \times 1\mu\text{m}$  or wider in area," as recited in claims 9 and 13. Therefore, it would not have been obvious for a person of ordinary skill in the art to have prepared a substrate having these particular properties.

In view of the foregoing remarks, claims 9, 12, and 13 are not obvious, and this rejection should be withdrawn.


#### **Conclusion**

In view of the above amendments and remarks, it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining, which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

By 

Dianna Goldenson

Registration No.: 52,949

DARBY & DARBY P.C.

P.O. Box 5257

New York, New York 10150-5257

(212) 527-7700

(212) 527-7701 (Fax)

Attorneys/Agents For Applicant